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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,741	08/31/2001	Yuji Sakai	P 282933	8398

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EXAMINER

RODRIGUEZ, GLENDA P

ART UNIT PAPER NUMBER

2651

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/942,741

Applicant(s)

SAKAI, YUJI

Examiner

Glenda P. Rodriguez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 4, 7, 8, 10 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4, 7, 8 and 11 is/are allowed.
- 6) ☒ Claim(s) 1 and 10 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruner et al. (US Patent No. 5, 914, 828) in view of Kaaden et al. (US Patent No. 6, 122, 134).

Regarding Claim 1, Bruner et al. teach a disk drive having a perpendicular magnetic recording system and a head configured to conduct a read and write operations in accordance with the perpendicular recording system (Fig. 2, Element 58, which is a recording head and Col. 5, L. 56 to Col. 6, L. 9 of Bruner et al.), said disk drive comprising:

A disk medium including a magnetized area corresponding to data recorded with the perpendicular magnetic recording system and the head and a servo area encoded with servo data (Col. 5, L. 56 to Col. 6, L. 9 Col. 11, L. 48-62 of Bruner et al.);

A decoding unit configured to decode the servo data (Col. 15, L. 52-64 of Bruner et al.),

Wherein the servo data is used for the position control of the head (Col. 16, L. 40-60).

However, Bruner et al. does not explicitly teach wherein the servo data is not a DC-free code.

Kaaden et al. teaches a magnetic media wherein It contains servo areas wherein when read, it

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contains no DC code (i.e. DC-free) (Col. 6, L. 1-19). It would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify Bruner et al.'s invention with the teaching of Kaaden et al. in order to effectuate proper transversal (i.e. perpendicular) tracking of the magnetic signal (Col. 1, L. 46-49 of Kaaden et al.).

Method Claim 10 is drawn to the method of using the corresponding apparatus claimed in claim 1. Therefore method claim 10 corresponds to apparatus claim 1 and is rejected for the same reasons of anticipation as used above.

Allowable Subject Matter

3. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the primary reason for allowable subject matter is the inclusion of the limitation wherein the read channel extracts the read signal depending upon the magnetization transfer position and eliminates a low frequency components of a read signal using the relationship $T_{\min} \leq \frac{-\ln(N)}{2\pi f_c}$.

4. Claim 4, 7, 8 and 11 are allowed.

The following is an examiner's statement of reasons for allowance: Regarding independent Claims 4, 7, and 11, the primary reason for allowance is the inclusion of the limitation wherein the read channel extracts the read signal depending upon the magnetization transfer position and eliminates a low frequency components of a read signal using the relationship $T_{\min} \leq \frac{-\ln(N)}{2\pi f_c}$.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

5. Examiner acknowledges that Claims 3, 5 6 and 9 were cancelled in the Paper filed by the Applicant dated 08/12/2004.

6. Applicant's arguments with respect to claims 1 and 10 have been considered but are moot in view of the new ground(s) of rejection.

7. Claims 2, 4, 7, 8, and 11 have been allowed based on the reasons stated under "Allowable Subject Matter" herein.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenda P. Rodriguez whose telephone number is (703) 305-8411. The examiner can normally be reached on Monday thru Thursday: 7:00-5:00; alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on (703) 308-4825. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



GPR
March 15, 2005.



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